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IPRE APPLICATION OF: Thomas L. Ritzdorf et al.

APPLICATION No.: 09/018,783

FILED: February 4, 1998

FOR: **METHOD FOR FILLING RECESSED  
MICRO-STRUCTURES WITH  
METALLIZATION IN THE PRODUCTION  
OF A MICROELECTRONIC DEVICE**

EXAMINER: Thomas J. Magee  
ART UNIT: 2811  
CONF. No: 1242

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Amendment in Response to Restriction Requirement

Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

The present communication responds to the Office Action dated 21 November 2002 in the above-identified application. Please amend the application to read as follows. The attached Appendix presents a marked-up version of the changes made to the claims by the current amendment.

In the Claims

1. A method for filling recessed microstructures at a surface of a semiconductor workpiece with copper metal comprising:

depositing copper into recessed micro-structures using an electrochemical process generating copper grains that are sufficiently small so as to substantially fill the recessed microstructures; and

subjecting the surface of the semiconductor workpiece with the deposited copper to an elevated temperature annealing process at a temperature below about 100 degrees Celsius for a time period that is sufficient to increase the grain size of the deposited copper.